

WE CLAIM:

1. A method for controlling a damping force of a damper, said method comprising:
 - generating a first operating current as a function of a desired force level of the damping force;
 - determining a temperature compensation as a function of an operating temperature of the damper; and
 - 10 applying the temperature compensation to the first operating current to generate a second operating current as a function of both the desired force level of the damping force and the operating temperature of the damper.
2. A device for controlling a damping force of a damper, comprising:
 - 15 a first module operable to generate a first operating current as a function of a desired force level of the damping force;
 - means for determining a temperature compensation as a function of an operating temperature of the damper; and
 - means for applying the temperature compensation to the first
 - 20 operating current to generate a second operating current as a function of both the desired force level of the damping force and the operating temperature of the damper.

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3. A system, comprising:
a damper operable to generate a damping force in response to a first
operating current; and
5 a controller,
wherein said controller is operable to generate a second operating
current as a function of a desired force level of the damping force,
wherein said controller is operable to determine a temperature
compensation as a function of an operating temperature of the damper, and
10 wherein said controller is operable to apply the temperature
compensation to the second operating current to generate the first operating current
as a function of both the desired force level of the damping force and the operating
temperature of the damper.
- 15 4. The system of claim 3, wherein said damper includes
magnetorheological fluid.
5. The system of claim 3, wherein said controller includes a module
operable to generate the operating temperature equating an ambient temperature of
20 the damper.
6. The system of claim 3, wherein said controller includes a module
operable to generate the operating temperature equating a measured temperature of
the damper.
- 25 7. The system of claim 3, wherein said controller includes a module
operable to generate the operating temperature indicating an estimated damper
temperature of said damper.

8. The system of claim 3, wherein said controller includes a module operable to determine a scale factor in response to a reception of a signal indicating the operating temperature of said damper, and operable to generate the first 5 operating current as a product of the scale factor and the second operating current.

9. The system of claim 3, wherein said controller includes
a first module operable to determine a set of scale factors and a set of
offset values in response to a reception of a signal indicating the operating
10 temperature of said damper, and
a second module operable to determine a scale factor of the set of
scale factors and an offset value of the set of offset values in response to a reception
of a signal indicating a relative velocity of said damper.

15 10. The system of claim 9, wherein said controller is further operable to
generate a third operating current as a product of the scale factor and the second
operating current, and to generate the first operating current as a summation of the
offset value and the third operating current.

20 11. The system of claim 9, wherein said controller is further operable to
generate a third operating current as a summation of the second operating current
and the offset value, and to generate the first operating current as a product of the
scale factor and the third operating current.

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12. A method for controlling a damping force of a damper, said method comprising:

generating a first operating current as a function of a desired force
5 level of the damping force;

determining a scale factor as a function of an operating temperature of the damper;

generating a second operating current as a product of the first operating current and the scale factor; and

10 providing the second operating current to the damper to thereby
control the damping force as a function of the desired force level of the damping
force and the operating temperature of the damper.

13. A method for controlling a damping force of a damper, said method
15 comprising:

generating a first operating current as a function of a desired force level of the damping force;

determining a scale factor and an offset value as a function of an operating temperature of the damper and a relative velocity of the damper; and

20 providing a second operating current to the damper in response to a determination of the scale factor and the offset value.

14. The method of claim 13, further comprising:

generating a third operating current as a product of the first operating
25 current and the scale factor; and

generating the second operating current as a summation of the third operating current and the offset value.

- SAC*
15. The method of claim 13, further comprising:
generating a third operating current as a summation of the first
operating current and offset value; and
5 generating the second operating current as a product of the third
operating current and the scale factor.
- CJW*
16. A device for controlling a damping force of a damper, said device
comprising:
10 a first module operable to generate a first operating current as a
function of a desired force level of the damping force; and
a second module operable to determine a scale factor as a function of
an operating temperature of the damper and to generate a second operating current
as a product of the first operating current and the scale factor,
15 wherein said second module is further operable to provide the second
operating current to the damper to thereby control the damping force as a function
of the desired force level of the damping force and the operating temperature of the
damper.
- 20 17. A device for controlling a damping force of a damper, said device
comprising:
a first module operable to generate a first operating current as a
function of a desired force level of the damping force; and
a second module operable to determine a scale factor and an offset
25 value as a function of an operating temperature of the damper and a relative velocity
of the damper, said second module is further operable to provide a second
operating current to the damper in response to a determination of the scale factor
and the offset value.

- C1
C2*
18. The device of claim 17, wherein
said second module is further operable to generate a third operating
current as a product of the first operating current and the scale factor, and
5 said second module is further operable to generate the second
operating current as a summation of the third operating current and the offset value.
- S82* >
19. The device of claim 17, wherein
10 said second module is further operable to generate a third operating
current as a summation of the first operating current and offset value, and
 said second module is further operable to generate the second
operating current as a product of the third operating current and the scale factor.
20. A system, comprising:
15 a damper operable to provide a damping force in response to a
reception of a first operating current; and
 a controller,
 wherein said controller is operable to generate a second operating
current as a function of a desired force level of the damping force,
20 wherein said controller is operable to determine a scale factor as a
function of an operating temperature of the damper,
 wherein said controller is operable to generate the first operating
current as a product of the second operating current and the scale factor, and
 wherein said controller is operable to provide the first operating
25 current to the damper to thereby control the damping force as a function of the
desired force level of the damping force and the operating temperature of the
damper.

SJ 037
21. A system, comprising:

a damper operable to provide a damping force in response to a

reception of a first operating current; and

5 a controller,

wherein said controller is operable to generate a second operating current as a function of a desired force level of the damping force,

wherein said controller is operable to determine a scale factor and an offset value as a function of an operating temperature of the damper and a velocity 10 of the damper, and

wherein said controller is operable to provide the first operating current to the damper in response to a determination of the scale factor and the offset value.

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15 22. The system of claim 21, wherein

said controller is further operable to generate a third operating current as a product of the second operating current and the scale factor, and
said controller is further operable to generate the first operating current as a summation of the third operating current and the offset value.

20 *SJ 047* 23. The system of claim 21, wherein

said controller is further operable to generate a third operating current as a summation of the second operating current and offset value, and
said controller is further operable to generate the first operating 25 current as a product of the third operating current and the scale factor.

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